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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,492	03/29/2001	Georg Reuther	MB-55	2792

7590 05/20/2004

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EXAMINER

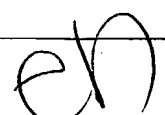
TRAN, HIEN THI

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/821,492	REUTHER ET AL.	
	Examiner	Art Unit	
	Hien Tran	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/29/01</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the drawings to comply with CFR 1.84(p)(5), e.g. they should include the reference sign(s) mentioned in the specification and vice versa.

Specification

3. The disclosure is objected to because of the following informalities:

On page 11, lines 3-4 it is unclear as to what applicants are attempting to recite, whether each housing part has an inlet cone and outlet cone and where they are shown in the drawings.

On page 12, line 10 and page 13, line 2 "socket" should be changed to --cone-- for consistency and clarity (note page 12, line 2).

Appropriate correction is required.

4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 6, 9-10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Buck et al (6,001,314).

With respect to claims 1, 6, Buck et al discloses a housing for an exhaust gas catalyst in motor vehicles with an internal combustion engine, the housing comprising:

a first seamless housing part deep-drawn of sheet metal; the first seamless housing part comprising at least one inlet cone 32, least one first pipe connector 46, and at least one first cylindrical housing mantle 16;

a second seamless housing part deep-drawn of sheet metal; the second seamless housing part comprising at least one outlet cone 32, at least one second pipe connector 46, and at least one second cylindrical housing mantle 14;

the first and second housing mantles connected to one another by a gas-tight peripheral connecting seam 18.

With respect to claims 2-3, Buck et al further discloses that the first housing part 148 has a cross-section outside of the area of the connecting seam 124 that is different from a cross-section of the second housing part 114 outside of the area of the connecting seam 124; the first housing part defining the stepped cylindrical cross-section (Fig. 5).

With respect to claim 9, Buck et al discloses at least one sensor connecting means formed in the area of connecting seam (note the space for oxygen sensor 360 in Fig. 7).

With respect to claim 10, Buck et al discloses an intermediate member 152, 318, inserted between the first and second housing parts (Figs. 5, 7).

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With respect to claim 12, Buck et al discloses that the housing is made of stainless steel (col. 2, lines 25-34)

Instant claims 1-3, 6, 9-10, 12 structurally read on the apparatus of Buck et al.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. The art area applicable to the instant invention is that of catalytic converter.

One of ordinary skill in this art is considered to have at least a B.S. degree, with additional education in the field and at least 5 years practical experience working in the art; is aware of the state of the art as shown by the references of record, to include those cited by applicants and the examiner (*ESSO Research & Engineering V Kahn & Co*, 183 USPQ 582 1974) and who is presumed to know something about the art apart from what references alone teach (*In re Bode*, 193 USPQ 12, (16) CCPA 1977); and who is motivated by economics to

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depart from the prior art to reduce costs consistent with the desired product characteristics. *In re Clinton* 188 USPQ 365, 367 (CCPA 1976) and *In re Thompson* 192 USPQ 275, 277 (CCPA 1976).

10. Claims 4-5, 7-8, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buck et al (6,001,314) in view of Maund et al (5,138,834) and Kruger (6,555,070).

With respect to claims 4-5, 8, Maund et al discloses provision of a plurality of first pipe connectors 32, 34 each having an axis positioned at an angle to the axis of the housing mantle and therefore the exhaust gas flow is deflected. Similar, Kruger discloses provision of a plurality of first pipe connectors 15 each having an axis positioned at an angle to the axis of the housing mantle and therefore the exhaust gas flow is deflected.

It would have been an obvious matter of design choice to one having ordinary skill in the art to provide more than one first pipe connectors, each having an axis positioned at an angle to the axis of the housing mantle as taught by Maund et al and Kruger in the apparatus of Buck et al, since such a modification would have involved a mere substitution of known equivalent structures. A substitution of known equivalent structures is generally recognized as being within the level of ordinary skill in the art. *In re Fout* 213 USPQ 532 (CCPA 1982); *In re Susi* 169 USPQ 423 (CCPA 1971); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *In re Ruff* 118 USPQ 343 (CCPA 1958).

With respect to claim 7, the inlet cone of Kruger does not have radial symmetry (Fig. 2). The outlet cone of Maund et al does not have radial symmetry (Fig. 2).

Since the shape of the inlet and outlet cones is not considered to confer patentability to the claim. It would have been an obvious matter of design choice to select an appropriate shape

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for the inlet and outlet cones, such as the shapes taught by Kruger and Maund et al in the apparatus of Buck et al, since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art, absence showing any unexpected results. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

With respect to claim 11, Kruger discloses provision of a housing including double shells.

It would have been obvious to one having ordinary skill in the art to provide a double shells in the apparatus of Buck et al so as to provide good thermal insulation for the catalytic converter as taught by Kruger.

11. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buck et al (6,001,314) in view of Dillon et al (WO 97/48890).

Dillon et al discloses provision of using a high temperature resistant metal, such as stainless steel and inconel in forming the housing and end cone.

It would have been obvious to one having ordinary skill in the art to select an appropriate material, such as inconel or stainless steel as taught by Dillon et al in the apparatus of Buck et al since both were art-recognized equivalents at the time the invention was made as high temperature resistant metal in purification system and since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

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Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is (571) 272-1454. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HT
May 18, 2004

Hien Tran
Hien Tran
Primary Examiner
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